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## **Cross-national Comparisons of Background and Confidence in Visual Arts and Music Education of Pre-Service Primary Teachers**

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*Abstract: This paper reports the findings of a study on pre-service teachers' background and confidence in music and visual arts education. The study involved 939 non-specialist pre-service primary teachers from five countries. Initially the paper identifies the students' perceptions of their background and confidence in relation to music and visual arts education. Secondly it examines any differences between the visual arts and music education background and confidence of Australian students and those from the other four countries. Results indicated that 25% of the subjects agreed or strongly agreed that they had a good background in music education and 16% indicated that they had a good background in visual arts education. In relation to confidence, 56% of the respondents indicated they felt confident teaching visual arts and 50% felt confident teaching music. There were also significant differences between countries in relation to background and confidence in the two art forms.*

### **Introduction**

Generalist primary pre-service teachers in Australia enter their teacher education courses with a variety of backgrounds and attitudes to the different subjects in which they enrol. The Senate Enquiry into Arts Education (Senate Environment, Recreation, Communication and the Arts Reference Committee [SECARC], 1995) found that in relation to the arts (music, drama, dance and visual arts) students often entered teacher education courses with very little formal background and low confidence levels. In their primary school experiences, they had little satisfactory arts education as their teachers were generally ill-equipped by their own pre-service training to provide them with developmental and quality arts experiences.

There is a general consensus that universities are not meeting this challenge as for the past forty years this paucity of quality arts education in schools has been highlighted in a number of reports (Department of Education, Employment and Work Relations, [DEEWR; 2008]; Department of Education, Science and Training [DEST], 2005; Lepherd, L. (n.d.); Russell-Bowie, 1993; Schools Commission and Australia Council [SCAC], 1977; SECARC, 1995) and little has changed. This research indicates that specialist teachers in the arts in most public schools are a rarity and with the crowded curriculum favouring mathematics and literacy, the arts are generally the first set of subjects to be left off the timetable (SECARC, 1995).

Over the past years, funding for visual arts and music programs, specialist arts teachers, resources, priority for the arts and hours in teacher education courses have all decreased significantly (Bamford, 2006; SECARC, 1995). Generalist primary school teachers are now expected, not only to teach social science, mathematics, science, literacy and physical education but also music, visual arts, dance and drama. This is despite the fact that many of them have not been adequately trained in some or all of these arts subjects. As a result, many primary schools have less

than adequate music and visual arts education programs. Teachers perceive that they do not have the confidence, competence, resources, time or priority to implement an effective arts program and so avoid teaching the arts (Bamford, 2002; O'Hara, 2005; Russell-Bowie, 2002). This scenario seems to be similar across the five countries on which this paper focuses, including USA (Bresler, 1991), Namibia (Mans, 1997), Ireland (Council of Europe, 2010), Australia (SERCARC, 1995) and South Africa (van Niekirk, 1997).

## Background

Earlier research into music education (Fromyhr, 1995; Mills, 1989; Russell-Bowie, 1993; Ryan, 1991) indicates that the majority of pre-service primary teachers enter their teacher education courses having minimal, if any, formal music education experience, either from school or from out-of-school activities. Lephard (1995) adds to these observations, indicating that many pre-service primary teachers have little musical literacy and the university time allocated for music education is inadequate to sufficiently prepare confident and competent teachers in music education.

Later research also indicates that students enter teacher education courses with very little background in formal music education and low confidence levels (Ballantyne, 2006; Conway, 2002; Jacobs, 2008; Jeanneret, 1997; Temmerman, 1997). This lack of confidence and background in the arts impacts on their future teaching career as teachers' beliefs and practices in music education are informed and guided by their prior experiences (Coopersmith, 1967; Harter, 1982 ; and Ryan (1991).

In relation to visual arts education there are similar findings. Welch (1995) investigated the personal visual arts experiences of pre-service primary teachers during their teacher education course. His findings indicate that these experiences are instrumental in developing their confidence in teaching this subject. The Senate Enquiry into Arts Education (SERCARC, 1995) notes throughout the report that pre-service primary teachers come to universities with poor arts experiences and negative attitudes, built up over a lifetime. In schools, support and services for Visual Arts in education have been cut back and the number of primary visual arts specialists has been decreased significantly. As a result, visual arts is one of the first subjects to be excluded from the curriculum when funds are slashed and the number of hours at the teacher education level has also been reduced significantly (Bamford, 2006; DEEWR, 2008; Ruppert, 2006).

This seems to be a global phenomenon in relation to the arts. In an overview of economically developing countries, including Namibia and South Africa, Bamford (2006) indicates that lack of: funding; resources; time and training in the arts were negatively influenced by the lack of sufficient funds for education as a whole (p.74). Similarly, in most developed countries, including Australia, Ireland and the USA, in practice, the arts are rarely part of the core curriculum in schools (Robinson, 2001).

The recent Australian *National Review into Visual Education* (DEEWR, 2008) confirms these findings, and indicated that pre-service teachers receive minimal input into visual arts in education and this relates to teachers' lack of confidence and anxiety about teaching visual arts in the classroom. Similar results are reported in the *National Review of School Music Education*, in relation to the confidence and background of generalist teachers required to teach music (DEST, 2005). These reports align with the findings of the report of the Senate Enquiry into Arts Education (SECARC, 1995), which commented that:

Generalist primary classroom teachers, because of their own poor arts experience at school, and because of inadequate teacher training, lack confidence to teach the arts. As a result... there is a strong impulse to marginalise the arts in their teaching (p.49).

In USA, similar reports indicate that lack of funding and time available in the school day were significant factors influencing the actual practice of the arts in schools (Huckabee, 2006). Bresler (1991) confirms this reporting that “training in the arts is inadequate. Teachers find arts education a difficult assignment” (p. 136) and “basic arts education does not exist in the United States today” (p.3). In Ireland, although the arts have played a major part in the lives of Irish children, and the arts are mandated in the syllabus, in practice, the arts in primary schools have been neglected over many years (Council of Europe, 2010).

In Namibia and South Africa, although the arts are an integral part of the people’s culture and lives (Woodward, 2007), the challenges to teaching the arts effectively in schools are similar however they are situated in a culture of extremes of inequalities. Often Namibian ‘black schools’ have no qualified arts teachers, instruments or art materials, while the ‘white schools’ have planned curricular implemented by trained teachers in excellent, well-equipped facilities (Mans, 1997, 2002). There are similar resourcing inequities across the country (Russell-Bowie, 2002) and although the arts appear on the curriculum and timetables, they are often not experienced in practice (van Niekirk, 1997).

Pre-service teachers need to have a strong background and confidence in the arts in order TO prepare them to teach these subjects in the classroom. In addition, this is confirmed by Bandura (1997) who indicates that confidence to teach a subject can influence teaching outcomes. Efland’s (1995) research showed that whether or not visual art is taught in the classroom depends on the attitudes of the teachers to these subjects and Russell-Bowie, Roche and Marsh, (1995) indicate in their research that background in a subject influences the confidence and effectiveness of teachers within in these subjects.

However having a strong background and confidence in one art form does not necessarily lead to being able to teach another art form confidently and effectively. Yeung, McInerney, Russell-Bowie, & Lau (2001) studied the multi-dimensional nature of self-concept in the creative arts and found that self-concept within the arts was domain specific and also skill-specific. This was consistent with earlier research by Marsh, Hey, Johnson and Perry (1997) as it indicated clearly that if students were confident and had a good background in one art form this had minimal relationship with their confidence and background in other art forms.

In summary, cross-national teacher education courses are enrolling pre-service teachers who bring with them minimal formal arts experiences in music and visual arts. It is unwise to expect the universities or colleges to reverse this trend in a few years, working only in class time, which is constantly being significantly reduced with each new course revision (SERCARC, 1995). This paper seeks to identify the perceptions of a sample of primary teacher education students from five countries about their background and abilities in relation to music and visual arts education and to see if there is any relationship between their confidence and background in each art form. It also examines if there are significant differences between their country and these perceptions. Based on the results of this survey, suggestions are made to enhance the teaching of music and visual arts education in primary schools in Australia and overseas.

## Aim

The data on which this paper is based were gathered as part of larger study focussing on pre-service teachers’ attitudes to the four art forms and were derived from only those survey questions that related to visual arts and music education.

Specifically this study examined the following questions:

1. Is there a reliable set of scales relating to confidence in visual arts education and music education, and background in visual arts education and music education, that could be derived from the data using exploratory principle component analysis?

2. How do generalist pre-service primary teachers across the five countries perceive their own background and confidence in relation to visual arts and music education?
3. What relationships are there between pre-service teachers' confidence and background in visual arts and music education?
4. Are there any significant relationships between the background and confidence of pre-service teachers between each of the five countries?

## Method

### *Participants*

The participants were 939 university students enrolled in tertiary generalist teacher education programs in Australia, Namibia, South Africa, USA and Ireland. Table 1 contains details of the samples within each of those countries.

Country	Number	Percent
AUSTRALIA (New South Wales: University of Newcastle; University of Western Sydney)	385	41
NAMIBIA (Windhoek College of Education)	187	20
SOUTH AFRICA (Durban and Pretoria Colleges of Education)	254	27
USA (Illinois: University of Illinois)	59	6
IRELAND (Dublin College of Education)	51	6
TOTAL	939	100

**Table 1: Respondents and their Country (University)**

### Survey Instrument

The survey instrument, based on a previous one for practising teachers in relation to music education (Russell-Bowie, 1993), was developed specifically for this study. The instrument covered the four strands of the creative arts (dance, drama, music and visual arts) and was administered in the five different countries. Apart from the demographic questions, each of the questions had one stem with four endings, and each of the endings related either to dance, drama, music and visual arts. Responses were given on a five point Likart scale. This paper reports on those items related specifically to visual arts and music education as listed in Tables 2 and 3.

### Data Collection procedure

Students were asked to complete the survey during lectures at each University or College. Students took between 15 and 30 minutes to complete the surveys, which were collected by the staff member in charge as students completed them.

### Data Analysis

The raw data from the surveys were then entered into an SPSS file and analysed using factor analysis, reliability testing, cross tabulations and correlations. Statistical procedures were selected in light of the questions to be tested. A set of a priori scales had been developed then exploratory principal component analysis with Varimax rotation was used to validate the scales, and Cronbach alphas were computed to check reliability of the scales. Frequencies and cross tabulations of students' responses to these scales were computed to gain an overview of the data. Pearson product

moment correlation coefficients were used to test the differences between the scales and one-way ANOVAs were used to test for differences between means.

## Results

In relation to the focus questions of this study, the following results were found:

**Question 1: Is there a reliable set of scales relating to confidence in visual arts education and music education, and background in visual arts education and music education that could be derived from the data using exploratory principle component analysis?**

Using exploratory principal component analysis with Varimax rotation 11 survey items listed in Table 2 were grouped together to form two scales in relation to students' perceptions of their formal visual arts background and their confidence and enjoyment of visual arts teaching. The criterion for selection of scale items was set at 0.5. Using this criterion, only one item (Q36b) cross-loaded on the second factor, but it was included with Factor 1 scale as Table 2 shows it had greater face validity.

Table 2 also indicates the items grouped into factors or scales, the Cronbach alpha coefficients of internal consistency of the two scales, and the percentages of positive responses (*agree/strongly agree*) for each item and for the two scales. The first scale (*Background in visual arts*) included survey items such as: having art lessons outside of school; being involved in visual arts in their leisure time; their family being involved in visual arts socially; and that they considered themselves to be an artist. The second scale (*Confidence and enjoyment in visual arts teaching*) included survey items such as: feeling confident about teaching visual arts lessons in general and the different specific forms of art; preferring to teach visual arts in a team teaching situation; having taught successful visual arts lessons; having a good background in visual arts and enjoying visual arts lessons in primary school.

Item	Label (Factor loading)	% Agree/ Strongly agree
<b>Factor 1: Background in visual arts (Alpha = .79)</b>		<b>16%</b>
Q23b	Outside of school I have had visual arts lessons (.79)	13%
Q21b	In my leisure time I am often involved in visual arts activities (.76)	28%
Q22b	My family is often involved socially in visual arts activities (.76)	16%
Q25b	I consider myself to be an artist (.72)	25%
Q36b	I have a good background in visual arts (.58)	33%
<b>Factor 2: Confidence / enjoyment in visual arts teaching (Alpha = .83)</b>		<b>56%</b>
Q33b	I feel confident about teaching visual arts lessons (.71)	53%
Q34b	In a team teaching situation, I would prefer to do visual arts (.74)	56%
Q61a-e	I am confident teaching the different visual arts activities (.79)	69%
Q37b	I have taught some successful visual arts lessons (.68)	52%
Q60a-e	I enjoy the different visual arts activities in lectures (.67)	78%
Q12b	In Primary school I enjoyed visual arts lessons (.57)	66%

**Table 2: Items used to ascertain students' perceptions of their Visual Arts background and abilities with percentages recorded for Agree/Strongly Agree responses and results of factor analysis.**

Similarly, two scales were formed from survey items, as listed in Table 3, in relation to students' perceptions of their formal background and confidence in music and music education. The criterion factor loading for selection of scale items was set at 0.45. With this criterion, there were no cross-loadings on the first factor. However there was one item (Q36a) which cross-loaded on the second factor, but was included with the Factor 1 scale as it had greater face validity.

Table 3 indicates the results obtained regarding students' perceptions of their musical backgrounds and abilities in music education. The first scale developed (*Background in music education*) included survey items such as being able to play an instrument well and clearly understanding music theory, having music lessons out of schools and considering themselves to be a musician, their family being involved in music activities, one family member being able to play an instrument and their being involved socially in music activities.

The second scale (*Confidence and enjoyment in music teaching*) included survey items such as enjoying primary school music, feeling confident about teaching music lessons, both generally and the specific types of music lessons, preferring to teach the music segment in a team teaching situation, having taught some successful music lessons and having a good background in music.

<i>Item</i>	<i>Label (Factor loading)</i>	<i>% Agree/ Strongly agree</i>
<b>Factor 1: Background in music (Alpha = .86)</b>		<b>25%</b>
Q18	I can play a musical instrument well (.74)	26%
Q19	I clearly understand music theory (.72)	28%
Q20	A family member plays a musical instrument well (.73)	40%
Q21a	In my leisure time I am often involved in music activities (.57)	45%
Q22a	My family is often involved socially in musical activities (.58)	37%
Q23a	I had music lessons outside of school (.71)	26%
Q25a	I consider myself a musician (.58)	23%
<b>Factor 2: Confidence and enjoyment in music teaching (Alpha = .77)</b>		<b>50%</b>
Q12a	I enjoyed music in primary school (.48)	64%
Q33a	I feel confident about teaching music lessons (.80)	47%
Q34a	In a team teaching situation, I prefer to do music segment (.76)	46%
Q37a	I have taught some successful music lessons (.64)	55%
Q57a-e	I am confident teaching the different music activity areas (.70)	59%
Q36a	I have a good background in music (.61)	38%

**Table 3: Items used to ascertain students' perceptions of their musical background and abilities with percentages recorded for Agree/Strongly Agree responses and results of factor analysis.**

The results indicated that there was a reliable set of scales relating to confidence in visual arts education and music education, and background in visual arts education and music education and that these were satisfactory for accepting scales for the other purposes of the study.

***Question 2: How do generalist primary student teachers across the five countries perceive their own background and confidence in relation to visual arts and music education?***

When the individual survey items were examined the following results were indicated. Only 13% had been involved in visual arts lessons outside of school, just over a quarter used their leisure time to be involved in visual arts, 16% said their families were involved socially in visual arts activities and a quarter considered themselves to be artists. When the means of all the items relating to Factor 1 (*Background in Visual Arts*) were computed, 16% of respondents indicated that they felt they had a good visual arts background.

In relation to their enjoyment of visual arts and visual arts teaching, just over two-thirds of the students felt that they had enjoyed visual arts in their primary school days. Just over half the students felt confident about teaching visual arts lessons. Two percent more would prefer to teach a visual arts segment of a multi-arts lesson. Of those sampled 69% were confident in teaching a range of visual arts activities, and just over half (52%) had already taught some successful visual arts lessons. Over three quarters of the students enjoyed being involved in a range of visual arts activities within the University/College setting. Table 2 shows when that the means of all the items relating to Factor 2 (*Confidence and enjoyment in visual arts teaching*) were computed, 56% of respondents indicated that they enjoyed and felt confident in relation to visual arts teaching.

In relation to the sampled students' perceptions of their formal music background prior to University or College, just over a quarter of students indicated that they played a musical instrument well, understood music theory, and/or had music lessons out of school. Forty percent of the students had a family member who played a musical instrument well, and 37% considered their family to be involved socially in musical activities. Twenty-three percent considered themselves to be musicians and 45% involved themselves in music activities in their leisure time. Table 3 shows that when the means of all the items relating to Factor 1 (*Background in music*) were computed, a quarter of respondents *agreed* or *strongly agreed* that they had a good musical background.

In relation to their enjoyment of music teaching, almost two-thirds of the students felt that they had enjoyed music in their primary school days. When it came to teaching music, 46% would prefer to teach the music segment of a team teaching lesson, 47% felt they were confident to teach music lessons. Of those sampled, 55% had taught successful music lessons, and 59% were confident teaching all the difference music activity areas. Thirty-eight percent perceived they had a good background in music. Table 3 shows that when the means of all the items relating to Factor 2 (*Confidence and enjoyment in music teaching*) were computed, half the respondents indicated that they enjoyed and felt confident in relation to music teaching.

When comparisons were made between the two subject areas, it was found that 25% of students *agreed* or *strongly agreed* that they had a good formal music background, compared with 16% of students *agreeing* or *strongly agreeing* that they had a good formal visual arts background. Fifty-six percent of students *agreed* or *strongly agreed* that they were confident and enjoyed visual arts teaching compared with 50% of students who felt the same about music teaching. These results shown in Tables 2 and 3 indicate the general trends from students sampled across all five countries.

***Question 3: What relationships are there between student teachers' confidence and background in visual arts and music education?***

The above results indicate that, although fewer students *agreed/strongly agreed* that they had a good formal visual arts background (16%) compared with their music background (25%), more students *agreed/strongly agreed* that they were confident and enjoyed visual arts teaching (56%) compared with those who were confident and enjoyed music teaching (50%). Pearson product moment correlation coefficients between the students' visual arts and music backgrounds and between their visual arts and music confidence and enjoyment were calculated. The results indicated that there was a moderately positive correlation between the students' visual arts confidence and enjoyment and their formal visual arts background ( $r = .507$ ) and there was a slightly stronger positive correlation between the students' music confidence and enjoyment and their formal music background. ( $r = .563$ ). This indicates that the better their background in the subject, the more confident they were. As shown in Table 4, there were relatively weak positive correlations between visual arts and music confidence ( $r = .295$ ), visual arts and music background ( $r = .375$ ), visual arts confidence and music background ( $r = .170$ ), and visual arts background and music confidence. ( $r = .219$ ).



	Conf/enjoy Visual Arts teaching	Visual Arts background	Music background	Conf/enjoy Music teaching
Confidence and enjoyment in visual arts teaching	r= 1.000 n = 866 p=.000			
Visual Arts background	r = .507 n = 866 p=.000	r= 1.000 n = 866		
Music background	r =.170 n = 866 p=.000	r= .375 n = 866 p=.000	r= 1.000 n = 866	
Confidence and enjoyment in music teaching	r = .295 n = 866 p=.000	r= .219 n = 866 p=.000	r= .563 n = 866 p=.000	r= 1.000 n = 866

**Table 4: Pearson product moment correlations between students' background and confidence / enjoyment in relation to visual arts education and music education**

**Question 4: Are there any significant relationships between the background and confidence of pre-service teachers and each of the five countries?**

The next step was to identify if there were any significant relationships between the background and confidence of pre-service teachers within each of the five countries. To answer this question, firstly percentage frequencies were computed for the two scales for both music and visual arts in relation to each of the five countries. These results are shown in Tables 5 and 6. In visual arts, when examining the percentages of students in Factor 1 (*Background in Visual Arts*), 9% of the sampled students from USA, 12% of Australian students, 16% of Irish students and 21% of both South African and Namibian students *agreed or strongly agreed* that they had a good visual arts background. In Factor 2 (*Confidence and enjoyment of visual arts teaching*) 37% of Namibian students, 44% of the USA students, 54% of the South African students, 57% of the Irish students and 68% of the Australian students indicated that they were confident and enjoyed visual arts teaching.

**Factor 1: Visual Arts Background (Alpha = .79)**

	N	% agree/ strongly agree	Mean	Standard Deviation
Australia	370	12%	1.97*	.99
Namibia	176	21%	2.23	1.22
South Africa	233	21%	2.23*	1.21
USA	59	9%	2.21	.93
Ireland	48	16%	1.93	1.09
TOTAL	886		2.53	1.13

\*Significant differences (df=4, F=3.9, p<.01)

**Factor 2: Confidence and enjoyment in Visual Arts Teaching (Alpha = .83)**

	N	% agree/ strongly agree	Mean	Standard Deviation
Australia	370	68%	3.74*+	.87
Namibia	176	37%	3.02*^#	1.03
South Africa	233	54%	3.38+^	1.02
USA	59	44%	3.32	.85
Ireland	48	57%	3.56#	.79
TOTAL	886		3.46	.98

\*+^#Significant differences (df=4, F=14.3, p<.000)

**Table 5: Visual Arts education: Percentage frequencies for Different Countries and Total in relation to their agreement or strong agreement for each Factor.**

In relation to Factor 1 in music education, (*Background in music*), 17% of Australian students, 21% of both Namibian and South African students, 34% of the USA students and 41% of the Irish students all *agreed* or *strongly agreed* that they had a good music background. In contrast, Table 6 shows that, when examining Factor 2, (*Confidence and enjoyment in music teaching*), 37% of the USA students, 39% of the Australian students, 42% of the Namibian students, 52% of the South African students and 63% of the Irish students *agreed* or *strongly agreed* that they enjoyed and were confident in music teaching.

**Factor 1: Music Education Background (Alpha = .85)**

	N	Percent agree/strongly agree	Mean	Standard Deviation
Australia	370	17%	2.30*	1.09
Namibia	176	21%	2.68*	1.07
South Africa	233	21%	2.61*	1.06
USA	59	34%	2.86*	1.24
Ireland	48	41%	3.00*	1.32
TOTAL	886		2.53	1.13

\*Significant differences (df=4, F=3.9, p<.000)

**Factor 2: Confidence and enjoyment in Music Teaching (Alpha = .77)**

	N	Percent	Mean	Standard Deviation
Australia	370	39%	3.2*	1.04
Namibia	176	42%	3.01^	1.26
South Africa	233	52%	3.40^	1.13
USA	59	37%	3.11#	1.17
Ireland	48	63%	3.71*^#	1.14
TOTAL	886		3.25	1.13

\*+^#Significant differences (df=4, F=6.3, p<.000)

**Table 6: Music education: Percentage frequencies for Different Countries and Total in relation to their agreement or strong agreement for each Factor**

There were clear differences between countries in the response percentages of students to each factor, so One-Way ANOVAs were computed to determine if there were significant differences between the variances of the scales for each country. In relation to the visual arts background and confidence of the students, the Scheffe test of significance was used. This test indicated that there were significant differences among the countries in relation to both Factor 1 (*Background in visual arts*) (df = 4, F = 3.9, p<.01) and Factor 2 (*Confidence and enjoyment of visual arts teaching*) (df = 4, F = 14.3, p<.000). In relation to Factor 1, differences between the countries were indicated between Australia and South Africa (p<.05) with Australian students scoring lower than South African students. In relation to Factor 2, the significant differences appeared between Australia and Namibia (p<.001), Australia and South Africa (p<.01), Namibia and South Africa (p<.01) and Namibia and Ireland (p<.05), with Australian students scoring higher than the Namibian and South African students and the Namibian students scoring lower than the South African and Irish students. The differences between Australia and USA are large, but not statistically significant possibly due to the small sample size of students from USA.

In relation to music and music education, a One Way ANOVA was again computed to determine if there were any significant differences between the means of each of these scales and each country from which the students came. In relation to Factor 1 (*Background in music*) the Scheffe test of significance indicated that there were significant differences between countries (df = 4, f = 3.9, p <.000), with significant differences indicated between Australia and each of the other four countries: South Africa (p<.01), Namibia (p<.01), USA (p<.01) and Ireland (p<.01). Results indicated that Australian students' scale scores were significantly lower than those in each of the other countries (p < .05, F = .000). For Factor 2, (*Confidence and enjoyment in music teaching*) there were also significant differences between countries (df = 4, F = 6.3, p <.000). These differences were between Australia and Ireland (p<.05), Namibia and South Africa (p< .05), Namibia and Ireland (p< .01) and USA and Ireland (p<.05). Namibian students scored significantly lower than their counterparts in South Africa and Ireland, and Australian students scored significantly lower than their Irish counterparts.

## Discussion

The results of this study seem to support some of the literature on arts education in relation to confidence and background of pre-service teachers. Very few of the sampled students (16%) indicated that they had a good background in visual arts education, be it socially, culturally or formally. However, slightly more, but still only a quarter of sampled students, indicated that they had a sound musical background. Research indicates that most pre-service teachers enter initial teacher education with minimal formal experiences in music and visual arts (Bamford, 2006; DEEWR, 2008; DEST, 2006; SERCARC, 2005). This research study confirms this literature. Sampled students across the five countries indicated that they and their families were not significantly involved in either music or visual arts outside of school and that they did not have much formal training in this area.

However, despite the low responses in relation to their background in both music and visual arts, the pre-service teachers indicated a more positive response to their confidence and enjoyment of both visual arts (56%) and music (50%) teaching. This finding included both their primary school experiences in music and visual arts and their professional experiences and confidence as pre-service teachers. Although the percentages responding positively in relation to confidence and enjoyment of music and visual arts teaching were substantially higher than those relating to their background, only about half of the students indicated that they were confident and enjoyed music and visual arts teaching.

There seemed to be a moderate correlation between the confidence/enjoyment and background of the students sampled, in that the stronger the background in music, the more confident they were in relation to music teaching, and the stronger their background in visual arts, the more confident they were to teach it. This confirms research by Bandura, (1997); Elfland, (1995), Hudson (2005), Luehrman (2002) and Russell-Bowie, Roche and Marsh, (1995) which indicates that background in a subject influences the confidence and effectiveness of teachers in these subjects.

There was little positive correlation between their confidence and/or background in music and their confidence and/or background in visual arts. This result confirms the research on the multi-dimensional nature of self-concept in the creative arts that indicates that self-concept within the arts was domain specific and also skill-specific (McInerney, Yeung and Russell-Bowie, 2001). The findings from this study suggest that being confident in teaching one art form has little influence on the confidence to teach other art forms. Therefore each of the arts subjects needs to be taught as a discrete subject, both in teacher education courses and in schools, with separate syllabus outcomes being achieved in each of the arts areas. Pre-service teachers need to develop their personal skills in each of the art forms as well as professional pedagogy to enable them to confidently and competently teach the arts in their classroom. It should not be presumed that if students participate in one of the art forms, then they will automatically develop skills in one or more of the other art forms.

Given the low confidence of generalist primary teachers in teaching visual arts and music, combined with the crowded curriculum, which focuses on literacy and mathematics (DEEWR, 2008; DEST, 2005; SERCARC, 2005), the arts are in danger of falling off the curriculum. One suggestion to counteract this situation would be the creation of an arts advisory position in each primary school or across several small primary schools. This teacher could then assist teachers in planning and implementing developmental arts programs that integrated with their classroom programs, but also developed the children's skills, understandings and knowledge in each art form. This approach could also involve the professional development of teachers so their confidence and knowledge about teaching the arts would be enhanced.

When the responses from the sampled students from the five different countries are examined it is clear that there are some differences between countries. However the significant differences are

mainly between Australia and Namibia, on one hand, and the other three countries, on the other. Sampled students from Australia indicated that they had a significantly poorer musical background than their counterparts in Namibia, South Africa, UWS and Ireland. New South Wales, the state from which the students were sampled, has a long history of not having specialist music and art teachers in the state primary schools. Generalist teachers have consistently reported that they lack confidence, competence and support in teaching the arts in their classrooms and the overall picture of music and visual arts education is bleak (Bamford, 2006; SECARC, 1995).

Many students from the African countries of Namibia and South Africa enjoy many integrated arts experiences as part of their daily life, in celebrations, family gatherings, funerals and holidays (Mans, 2002; van Niekirk, 1997). Irish students similarly have a rich background of music, and in their culture, singing and playing instruments has been a way of life for many of them and their families (Council of Europe, 2010). For many years American students have developed proud and exemplary programs of musical performances within their primary and secondary schools and many young adults would have been involved in several years of band and choral programs both inside and outside of school arts (Bresler, 1991; Huckabee, 2006). This study indicates that in many ways Australian students have minimal formal participatory experiences in the arts, in comparison with their African, American and Irish counterparts.

However, despite the fairly minimal formal background in music and in art, Australian students were significantly more confident in relation to teaching visual arts than their African counterparts in Namibia and South Africa. Namibian students were significantly less confident than their counterparts in South Africa, Ireland and Australia. In relation to confidence in music teaching, once again Namibian student teachers were significantly less confident than their South African and Irish counterparts, and the Australian students were significantly less confident than the Irish students.

One could conjecture that, although the arts feature regularly in Namibian culture and family life (Mans, 2002), this is not seen as giving the pre-service teachers specific visual arts skills that could be passed on to children within the formalised school situation. Also there may not be the resources available in their schools to give them the opportunity to experience a range of visual arts activities and thereby increase their confidence in this area (Mans, 1997). In the developed countries, in general, there are many more resources available in these areas than in the Southern African schools. For example, whereas the great majority of Australian, Irish and American schools would have CD players, CDs, pencils, paints, brushes, paper and other media for their students to use in schools and teacher education courses, many Southern African schools do not even have windows, running water or electricity, so even basic visual arts and music equipment may not be available (Russell-Bowie, 2000).

However, these children come from a culturally rich arts background and are often involved in arts activities on a daily basis within their families and communities but not within the school situation (van Niekirk, 1997). To respond to this scenario, music and visual arts skills learned from the family by children and teachers, and having great value within the non-school community (Woodward, 2007), could be acknowledged as significant within the school situation. These skills could then be used and developed in an integrated approach to learning, as is part of their culture, to achieve visual arts and music outcomes and build confidence and further skills in their teachers and pupils. Teacher development and adequate resourcing would also go a long way towards alleviating the lack of arts education in primary schools.

## Conclusion

This research has confirmed much of the research on background and confidence in relation to arts education. It indicates that, generally, sampled students across five countries enter their

teacher training institutions with little formal music or art background. They are also are not very confident in relation to teaching visual arts or music education. Although studies have been undertaken in relation to music and visual art education in individual countries, little comparative research seems to have been completed. This study adds to previous research in that it compares results from five countries. In every country, pre-service teachers need to be given the opportunity to develop their personal skills in music and art, as well as learning the pedagogy associated with teaching these subjects. With enhanced confidence and competence in these areas they may then be able to present effective arts programs to the children in their future classrooms. This education will require resources, time and energy. However it may be the only way to break the decreasing practice of arts education in primary schools (SERCARC, 1995). The goal is to have pre-service teachers of tomorrow arrive at universities around the world, already equipped with a good background in visual arts and music, full of confidence that may provide a firm foundation for their creative arts education courses. This will equip and enable them to teach quality arts program in their classrooms.

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